



## Technical Data Sheet

# CRISTALLIT®

**Art.-No. 2 05414**

## White rapid mortar for natural stones

### Properties:

- quick crystalline water bond
- rapid hardening
- white in colour
- for use up to Surface thickness of 5mm
- for interior and exterior use
- resilient
- According to German Industrial Standard  
DIN EN 12004, C 1 FT

### Areas of application:

CRISTALLIT is particularly suitable for jointing and arranging of calibrated natural stones, cast stone tiles possessing extreme water absorption properties also including ceramic surfaces on stone ware and earthenware.

Furthermore it is suitable for limited work periods and placement of ceramic material such as crystalline marble, limestone etc. fine stone ware and glass mosaic. Due to its quick crystalline water bond, this provides extra protection against discolouring caused by the effects of the stones own ingredients.

CRISTALLIT is suitable for the secure joining of even surfaces with load bearing capability. It is also suitable as a thin bed adhesive for tile laying on SCHOMBURG mineral and dispersion binding sealants.

For application on permanent wet constructions such as swimming pool surfaces and public shower facilities, we recommend 2 kg of UNIFLEX-B added to 25 kg of CRISTALLIT mortar for a better modified floor structure. For application on horizontal, exterior surfaces ie: Balconies and Terraces, we recommend using the mixture ratio of:

8 1/3 kg of UNIFLEX-B to be added to 25 kg of CRISTALLIT.

### Technical Data:

Composition: cement, Sand, and additives  
Colour: white  
Filling density: approx. 1 1/2 kg/dm<sup>3</sup>

### Processing/

Substrate temperature: + 5°C up to + 25°C  
Processing time\*): approx. 45 min.  
Adhesion Period\*): within 10 to 20 minutes  
Traversable\* ) after: approx. 4 to 6 hours  
Operationable\* ) after: 6 hours  
Fully operationable\* )  
after: 7 days  
Consumption: approx. 2.10 kg/m<sup>2</sup>  
with serrated trowel –  
each tooth width of 6mm  
approx. 2.80 kg/m<sup>2</sup>  
with serrated trowel –  
each tooth width of 8 mm  
approx. 3.60 kg/m<sup>2</sup>  
with serrated trowel –  
each tooth width of 10 mm  
clean equipment with water  
immediately after use  
Cleaning:  
Packaging: 25 kg Sacks  
Storage: in dry storage for approx.  
6 months in original closed  
sacks, open sacks are to be  
used up as soon as possible

\* ) The values refer to 20°C ambient temperature and at 65 % relative air humidity.

Test Certificates: acc. to DIN EN 12004, MPA NRW (North Rhein Westfalia, Germany). Test Certificate No.: 220003502-04

### Surface preparation:

CRISTALLIT is suitable for secure laying on all general surfaces according to German Industrial Standard DIN 18157 Part 1 for eg: Concrete, aerated concrete, plaster, Cement Screed (CT) and (CA) Screed and Masonry etc. Generally, a secure, closed surface finish must be achieved in relation to the products capabilities.

---

# CRISTALLIT®

The surface must be secure, clean, capable of load carrying capacity, and to be free of separating substances and continuous cracking. Coatings, Paint residues, Oils, sinter layers and loose particles are to be removed in advance.

Prior to binding, even concrete surfaces are to be abraded, absorbing surfaces are to be primed with ASO-Unigrund (Universal Primer). Anhydrite screed surfaces are to be milled and shot blasted including, all types of calcium sulfate bonded surfaces are also to be carefully primed with ASO-Unigrund (Universal Primer) – see annotations.

For measuring the surface maturity a moisture density test is to be carried out using the CM-device. The CM-moisture content (humidity) should not exceed the following values:-

- CT 2 CM%
- CA without Floor heating at 0.5 CM %
- CA with floor heating at 0.3 CM %.

The “CM” test is required to be carried out according to the up to date working instructions, instructed by the FBH-AD and coordinated using the Information Transfer provided by the Technical committee for floor constructions.

## Product preparation:

Mix only in a clean vessel using clean water (approx. 5 1/4 l to 5 3/4 l adding 1 Sack of CRISTALLIT (25 kg Sack) to the measured water. We recommend using a suitable mixer at approx. 300 – 700 rpm, mixing until a homogenous smooth mass is achieved.

Mixing Ratio:

1 l of water to 4.3 – 4.8 kg of CRISTALLIT or 5 1/4 l to 5 3/4 l of water to 1 sack of CRISTALLIT (25 kg). After a short maturing time the components are to be mixed once again. Do not mix more joint mortar than is required for the application, keeping within the handling time of 30 minutes.

The already stirred adhesive is to be spread over the

spactling surface, combing with an appropriate toothed trowel. Natural Stones or tiles are to be pushed lightly into place.

For non-calibrated materials we recommend application with CRISTALLIT-MBK-flex using the Floating-Buttering method. Do not cover too much surface with Natural Stone or tiles, allowed within the adhesion time given. If the same mixing bucket is being used it is advisable to clean as often as possible, as the already hardened CRISTALLIT agent acts also as an accelerator.

Not to be mixed with other mortar cement consistencies!

## Important advice:

- Not designed for under water applications
  - Only lay tiles using ASODUR-EK98 for applications with ASOFLEX-AKB
  - To reduce the effects of water absorption caused by the products key components, we recommend the application of ASODUR-EK 98 for laying of serpentine, slate and Sinter stones/Cast Stones containing natural stone elements.
  - For laying Sinter Stones/Cast Stones we recommend our thin bed mortar, 25 kg of CRISTALLIT-flex mixed with 2 kg of UNIFLEX-B.
  - For laying of Natural Stone and cast stone the specific product properties of the surface topping and the Manufacturers recommendations are to be taken into effect (effects of colorisation and key product factors). It is advisable to carry out adhesion tests in advance!
  - For laying of Natural Stone on bituminous mastic screed (with hardening class IC10 and IC15) a mixture of 4.2 kg of UNIFLEX-B to 25 kg of CRISTALLIT is required.
  - For laying of Natural Stone on heating screed a mixture of 2 kg of UNIFLEX-B is to be mixed with 25 kg of CRISTALLIT. Heating screed surfaces prior to application are to be pre-heated according to certified rules of technique.
  - Calcium sulfate bonded surfaces are to be carefully primed ASO-Unigrund-GE (Universal Primer) or ASO-Unigrund-K with mixing ratio: 1:3 Water!
-

---

# CRISTALLIT®

- To reduce forming of ettringite in calcium sulfate bonded surfaces we recommend application of UNIFIX-AEK for laying of such surfaces with remaining moisture up to 1 % for heated and 1.5% (according to the CM values!) for unheated constructions! The effects caused by the specific product properties is to be taken into account!
- Thin bed mortar which has already hardened should not receive additional water or new mortar and be made workable again, which weakens the structure causing an insufficient strength development.
- For laying of tiles, slabs on highly stressed areas such as for Balconies and Terraces, we recommend the application of a high elasticated binding sealant system (AQUAFIN-2K or AQUAFIN-2K/M).
- For permanent under water areas (Swimming pools and water vessels etc.), we recommend the use of our thin bed system mortar UNIFIX-2K or UNIFIX-2K/6, on such areas for application with the appropriate SCHOMBURG sealants.

The effects of the specific product properties on the surface is to be taken into account.

Non treated areas are to be protected from the effects of CRISTALLIT!

Direct contact between the cementitious tile mortar and magnesite screed causes weakness and destruction of the magnesite screed, a chemical reaction effect of the properties, results in expansion tendency due to magnesia. A back drop in the moisture load capacity of the surface must under all circumstances be prevented. The magnesia base is to be mechanically abraded (milled) and is to be primed (approx. 250 g/m<sup>2</sup>) with ASODUR-D2 - Epoxy resin and an additional 5% max. of water. After a waiting time of 12 to 24 hrs at an ambient temperature of + 20°C, the second layer of ASODUR-D2 can be applied (approx. 300 - 350 g/m<sup>2</sup>). The freshly layed siliceous sand (Quartz sand) with (grain size 0.5 to 1 mm) is to be spread over the area. After waiting a further 12 to 16 hrs the tile laying can be carried out.

The up to date, active rules and regulations are to be adhered to:

(German Industrial Standards such as): DIN 18157, 18352, 18560, EN 13813 and DIN 1055. BEB-Info Sheets (Bundesverband Estrich und Belag e.V. - German Federal Association for screed and surface laying).

Including technical information interface coordination for heated flooring constructions.

Other technical literature currently handed out by the German Federal tiling Industry, such as:

1) "references on sealants in connection with ceramic tiling and slabs for interior and exterior use" (August 2000)

3) "settlement joints on surfaces covered with tiles and concrete tiling"

4) see 1.

5) "Ceramic Tiles and slabs, Natural Stone and cast stone on concreted surfaces, floor constructions with layers of insulation"

6) "Ceramic Tiles and slabs, Natural Stone and cast stone on heated concrete floor constructions"

7) "surface constructions covered with tiles and slabs for outdoor Building surroundings"

Please adhere to current EC Materials Safety Data Sheet (MSDS).

With a low content of chromate according to TRGS 613.

**GISCODE: ZP1**